

Still Alive With Sir Clive!

ZXir QLive Alive!

The Times/Sinclair North American User Groups Newsletter

Volume 7 No. 2

Summer '87

Chairman

Donald S. Lambert

Auburn, IN

MEMORY MAP

ROUTINES

ADDRESS

- 1 Information and Chairman — Treasury Notes
- 3 *InputOutput* — by Abed Kabaia
- 6 WIDUP-CAD83
- 8 24-Pin Printer Driver — Al Feng
- 9 TS-1500 Cd Patch
- 10 Battery Backup for the Z88 — Donald Lambert
- 11 From The Chairman's Desk — by Donald Lambert

FILES

- 12 QHT - Off The Net — by Tim Swenson
- 13 More Not Surf'n -2068 — by David Lasev
- 14 Insomnia Over the Z88 — by Donald Lambert
- 15 Civilization ZX-41 Game ZX-TEAM MAGAZINE
- 17 Daisy Be Good XI — by David Lasev
- 19 Running the QPC on a PC — by Robert Hartung
- 21 Hack the ZX Spectrum — Les Cottrell

SUBROUTINES

- 25 Unclassified Ads
- 26 FWD Competition



They said,

It couldn't
be done



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ESTABLISHED 1981

THE TIMES/SINCLAIR NORTHAMERICAN USER GROUPS NEWSLETTER

T/SNUG Information

We wish to support the following platforms: ZX-01/02, T/S 0000, Spectrum, T/S0000, 586 and QX. If you have any questions about any of these list Sinclair contact the:

Chairman

Chief/Moderator

Donald S. Lambeth (chair)

Vice-Chairmen

Tape & JLO PD Library

D. G. Smith
485 Stone St.
Johnstown, PA, 15906
814 330-6996

Z88 Library

Dave Bennett (chairman)
1379 Timber View Dr
Middletown, PA 17325-9146
717 732-4374

ZX-01 PD Tape Library

Ed Sauer
2136 Chandler Downs Cir
Orlando, FL 32825
407 340-3124

BMC Enterprises

Rod Green (chairman)
14784 St. Quad Green Cir
Oregon City, OR 97045
503 652-7489 FAX 503 652-4136

T/S 0000

Rod Humphreys (chairman)
3084 Collins Pl.
Delta, BC V4C 1R6 Canada
491 383-3812

QL PD Library

John Davidson (chairman)
895 Pleasant Cir
Geneva, IL 60134-1453
708 232-6147

AERCO & Z80 Moderator

Kathy Watson
46234 Ardady Dr
Mt. Clemens, MI 48036

BBS - - - - -GATOR- - - - -

Bob Swager (chairman)
613 Putnam Cir
Streamwood, IL 60077-1647
630 837-7937 fax 630 576-8928

Any of the above can also be reached by e-mail through the NMCC BBS 847 432-8228

ZXir QLive ALIVE!

Is the newsletter of T/SNUG, the Times/Ministar North American User Groups, providing news and software support to the T/S community as a VOLUME of five newsletters per year, beginning with the Spring (March) issue.

T/SNUG's main goal is to preserve and encourage the use of Sinclair computers by providing an open forum for the exchange of knowledge, building and maintaining of software libraries. Providing vendors, repair services and members with free ad space.

It is the user groups and individual subscribers, rather than the vendors, that provide the primary support for the newsletter. Vendors and developers receive the newsletter free of charge, though contributions from vendors and user groups is gratefully accepted. Please support our vendors and service providers whenever possible.

If you have a problem or you have solved a problem, please share it with the rest of us. No problem will be considered unimportant.

Editor/Treasurer LatKah PD Library

You can keep T/SNUG alive by an annual contribution of \$42 for one VOLUME made payable to Abed Kahale. Send check to -

ABED KAHALE

3343 S FLAT ROCK CT
SIERRA VISTA AZ 86088-8874
520 378-3424

Back copies are available for \$4.75 each postpaid.

Treasury Notes

As of June 3, 1997, we have a balance of \$1001.29

Article Contributions

Send in your articles by tape or disk. Send your inputs to:—

DONALD LAMBERT
1301 KIRKLANDER PL
AUBURN IN 46706-3070
Phone 219 925-1372

By handcopy, H4200 or modem (3.2K B) to
Abed Kahale

E-mail: AKahale@compuserve.com

Welcome

Donald Lambert

Ben Wallerman

John Kapellman

GATOR's TWISTED PAIR

To better inform the Sinclair Community, free 15-hour a day BBSs are now provided to serve you. You are encouraged to exchange mail and use the free sections of these local BBSes and also be available to all.

Q-Box BBS 818 324-9978
Utah, Michigan

SCC Server Joe Morone
<http://members.tripod.com/~bdmnet/>

SOL BBS 520 982-6666
Tucson, Arizona

NMCC BBS 847 432-1508
Arlington Heights, Illinois

If you know the Internet E-Mail address of a Sinclair user, but do not have access to Internet, simply address your E-Mail to GATOR. Further on the 24-hour NMCC BBS and include the name and E-Mail address of the user you wish to reach. Then check the NMCC BBS from time to time if you expect reply.

We encourage you to exchange mail and contribute to the UPLOAD section. Call and register using your first, last name and phone number along with a password you won't forget. Write it Down! Do not try to do anything else at this time.

When you call-in the next time you will have Level 5 security and be able to enjoy full user privileges. The BBS has smaller sections called conferences. Select "3" for "Join a Conference". Select "T/SNUG" to get into the Sinclair Section. The mail you then read will only be from other T/S users. Use command: ART for articles. Add for rate and INFO for names when UPLOADing.

For help, contact the SYSCOP, Bob Swager, by leaving a message, mail, E-Mail or phone. Help: swager-22000000@gmail.com.com

Input/Output

by Alfred Klabala

Bulletin - May 7, 1997

By all accounts of those present, the 1997 North American QL Show was a success! Probably the best one yet.

It was good to see some old friends again and it was also good to see some new faces and to be able to put those faces to names. The location was good with easy access to the hotel and show site and plenty of good restaurants nearby including the one that the show was held at.

The Aurora card for the QL seems to have been a big hit as it sold without even having a demo! The system intended for the demo impressed someone enough to offer Frank Davis of FWD Computing an offer he couldn't refuse! From what I heard and saw, Aurora sold quite well anyway.

European dealers present were: Stuart Honeyball of Miracle Systems, Roy Wood of QBranch, and Jochen Metz Software. There were a few other European visitors who came just for the show. Stuart was there to support Miracle's products now being sold by QBranch. Roy had a number of programs available including ProWESS and the new version of LineDesign. Jochen was busy with updates including impressive new versions of GD and QMenu along with sales and renewals of QL Today.

American dealers present were: Frank and Carol Davis of FWD Computing, Paul Holmgren, NESQLUG, and QBox-USA (we had a small number of Quanta items for sale). FWD had Aurora cards for sale along with a wide range of software for the QL. They also had lots of Z88 items. Paul had lots of older and used goodies for sale and seemed to have quite a popular table. NESQLUG was selling memberships and renewals along with Wood and Wind Computing's products.

The latest issue of QL Today debuted at

the show and a quick look reveals that this magazine just keeps getting better. There is also news of a number of new items planned or in progress for the QL.

All in all, the 1997 show was great, there was lots of enthusiasm and optimism and it's quite possible that there will be a show at the same site in 1998. Stay in touch!

QBox

AC Adapter for the Z88

I had a good 115-volt AC to 5-volt DC mains adapter as I showed them out. Two had just less than 5 volts DC while most had 5 VDC and one had as even 6V VDC. The latter was a (35-0000) mains adapter. The plug fitted, polarity was correct and the amperage (current) was high enough so I tried it. In fact, the voltage is too high since the screen did a funny thing and the Z88 cranked up with a locked-up keyboard. A 7.2 volt battery pack is recommended so that 7.2 volts DC must be near the top limit of allowable voltage. The computer seems to be QL after a soft reset. QD

Donald S. Lambert

The power supply must not exceed 7.2 VDC

Well, Alad, I'm going to SEND this to you line by line!!

Regarding QD Pruehl's excellent article on LKDISK, let me mention another "basic disk handling function," by using the FDISKAT key, below the key for "H" FORMAT is fairly, sure it formats a disk, as follows

Track/Size 000/000

Track/Size 000/000

Track/Size 000/000

Track/Size 000/000

Track/Size 010/000

Track/Size 015/000

Track/Size 020/000

Track/Size 021/000

Track/Size 024/000

according to the number 1 of tracks for 0, 1, 2, 3, 4, 5, 6, 7, or 8, respectively, as the command

FORMAT "n",

This is very useful, when loading upstarters (RAMDISK)...

We have been using DPM, ZFORMAT, Converting 3.00, Converter with pull-down menus, LogCall, and DUS for years, due to the ready access to Larkins Disk Utilities. DPM is by far the most convenient little set of disk file managers, whereas CMDATDIS and DUS have many unique features, and their pleasure of capabilities! Confiding oneself to LogCall would be like telecommunicating in SES mode ONLY, when a lot of things are better done in

TERMINAL mode

Those of us, who don't mind processing all disk operations with "RANDOMIZE 100", realize that Lenny implemented LKDOS by way of an interrupt at RAM location 100 (and 102 for that matter!) That is very useful information, and it gets mentioned with every CALL to disk operations!

In conclusion, let me state my informed preference for a screen with black INK (0), white PAPER (7), and eyes BOLDING (5)

KEEP ON TIMEX'n

PS: LKDOS might not be such a good choice for new 386 owners, as there has been no OEM support for years (but, LKDOS is both compatible with LKDOS and supported by John).

Dear Alvin

Please tell Don, that Eric Johnson has heavily 2048's and Frank Dene has 2047 of them. So, there should be plenty of computers for him to finish his newsletter project.

In the West Ada, Doug Wagoner is looking for terminal programs to run 2856 models on TS-1000 and TS-2068 on cassette format.

Well, RMD Enterprises with "no, so I would just give Rod Gorman a call at 303-435-1416

Your message was forwarded to Doug

Right now, I'm looking at a cassette with MTERM 1, on one side for TIMEX models 1800 & 1806, on the other side for Timex model 3068. Given thirty more minutes, I'm sure to find MTERM 2 in the same format, and MTERM 3 is better than MTERM 2

The Internet address for Jose Moreno is given as < <http://members.tripod.com/%7Eheipme/> >

Well, somebody better help all us users of the 2068 out here, because we don't have a TLIDE (-) on our keyboard! And, we don't ALL have an APPLE, which I am now using to write this letter to ZXA Magazine. On my local Internet service, we can all substitute the following three characters in a row for - - WTE.

Then, Jose's address appears as <http://members.tripod.com/%7Eheipme/> So, KEEP ON TIMEX'n (HIM)HIM Dene

Here is a copy of the message, I sent to Gil Parrish.

Yes, I have Superdriver - printer utilities by Jack Deberry. They are distributed by RMD Enterprises. So, Gil, I would call Rod Gorman at 303-435-1414 to request a copy.

Kind of messy, but KEEP ON TIMEX'n

David Lammov

2580 N JOHANN DR
TUCSON AZ 85745-1122
dlammov@excite.net

Dear Alvin,

Thanks for this info, but, since David has just pointed me toward Rod Gorman, I apparently don't need David's address!

Still, your message was helpful in explaining what's

David's message was. I asked the question some time back, and I hadn't seen the newsletter yet, so the name "Superdriver" didn't mean anything to me off-hand today. Since I work with so many older computers, I wasn't even thinking Times/Roschier until I saw your message. Now I at least know what he was trying to communicate.

I only just got the AERCO interface fired up a few days ago, I had some initial panic that it didn't work. Once I attached the Larkin disk interface, then the AERCO printer interface, and finally the 2040 printer interface (since you can have both a large printer and a 2040 on-line at the same time), I think there was such downward pressure back there that the flux prevented the printer interface from working. Once I provided some support, it works like a champ.

Thanks for your help

Gil Parrish

187763.1161@compuserve.com

Dear Alvin,

I got the ZXA Driver in the week - Thanks.

I was glad to see the information about the AURORA QL-replacement mentioned printed in the ZXA. Even if it is something that I probably won't be getting. I keep hoping for some information on feedback from Bill Cable about the QPC simulator - either directly, or through the pages of ZXA/ and/or MEGALOO News (or any of the newsletters that Bob has not sent lately).

My disappointment with EMSQ's display would be increasing with the passage of time if it hadn't occurred to me to make out the vertical adjustment on the 13" original monochrome VGA monitor that I picked up some time ago (what was I thinking? ...) even so, lot of black space surrounds the EMSQ display image on all sides. The monitor has a toggle to the normal DOS display has the equivalent of about a 12" monitor.

I would guess that using the 15" vertical monitor is closer to using a normal 20" monitor as far as the height is about the EMSQ text, when the vertical is moved out, and the residual height is about the same as DOS text on a 14" monitor, but the width of the EMSQ generated characters on the 15" vertical monitor is only about 1/4 the normal aspect ratio.

I know that I do not have plans to get a 20" monitor in order to have a normal sized display, so my monochrome blip will have to do for now.

I guess too many QPC/EMSQ users, in general are too passive (i.e. Grateful for getting anything new) to complain. Your Pal,

Al Peng

Albuquerque, NM

From: William M Swenicko MD
To: alshub@compuserve.com
Re: ZXA

I use reference to this magazine when borrowing for info on Times-Roschier and similar computers. Jose Moreno suggested I contact you for more info on the magazine. I'm interested.

Wally Swenicko MD

Minneapolis, MN

vwvwrk@maroon.umn.edu

Please provide your e-mail address and I will

mail you a copy. Copy not sent

Sender: dig@world.std.com

Date: Tue, 23 Mar 1997

From: Robert L. Gallagher <rlg@world.std.com>

To: CableBoyle <cable@cyberpost.net>

Cc: Doug Levine <dlevine@comcast.net>, Don

Wallman <dwallm@planetinternet.org>, Bob Dyl

<rdyl@planet.com>, Andy Hirschsky <YIM73572

@compuserve.com>, Albert Kahala <AKAH73@com

@compuserve.com>

Subject: Re: QJL Show Cauting Light

In-Reply-To:

<T9W733242049%VAAGK236@cyberpost.cyberpost.net>

To whom it may concern - I received the above message, along with one previous to it, in my e-mail address Mr. Gilson must have had the address in the past and since changed it. Please correct your address book accordingly.

rlg (Robert L. Gallagher)

From: CableBoyle

> 1997 North American QJL Show

Below is the latest list of people expected at the show. More people are registering now every day so it will definitely be as large a show as we have had in the past few years. There is one show that I am a little unsure about and I want to ask for any suggestions or help that any of you might have. Last year we had a special machine that Al Boehm was able to buy for us that projected the computer display to a large screen. This year that machine will not be available. I think it is important to be able to display the demonstrations as well as possible so I am introducing any suggestions that anyone has. The best alternative that I can come up with is a device called a PC-TO-TV Video converter. There are many types and they range in price from \$80 to \$350. We may be able to rent a large screen TV for the show and then with one of these devices we could have a screen that everyone could see. Has anyone had any experience with this device? Does anyone have one they would bring? Could anyone recommend a brand or place to buy one? Thanks. I have also promised Jordan that we would provide a SVGA Monitor for him to use. I will bring my PC with monitor but it would be good to have another monitor. Is there anyone who can bring a an extra SVGA monitor? Thanks for help and suggestions. People Expected At The Sanitized Show May 3rd

As of April 7:

Al & Dorothy Boehm
Dorothy & Inge Buder
Bill Cable & Mary Boyle
Bob Gilder
Janet Hawkins
Dave Bennett
John Impellizzeri
Joe LaFurcata
Michael A. Quaresima

Alabama, USA
Germany
New Hampshire, USA
New York, USA
California, USA
Pennsylvania, USA
Minnesota, USA
New York, USA
Virginia, USA

Harvey Rat
Harold Jones
Hob L. Schatz
Don Waltherman
Keith Popley
Doug Gillespie
Paul Holmgren
Doug LaVigne
Bob Milroy
Dean Parker
John Wiggins

New York, USA
Pennsylvania, USA
Delaware, USA
Michigan, USA
Maryland, USA
Ohio, USA
Indiana, USA
Tennessee, USA
New York, USA
Maryland, USA
Delaware, USA

Frank Davis of FRED Computing USA
Shurt Honeyhill of Missile Systems England
Jordan Hess of Jordan Moss Software Germany

Dear Albed,

That is really interesting. We are trying to learn, what is the best way to send ASCII files over the internet.

First, we are going to spare you and others the waste of time, making our failures, by sending the e-mail to ourselves first.

Second, it appears true, that MacCom has difficulty, SENDING Word Processor CODES, either MISCLIFT or AppleWorks in any case.

Third, we have to protect the use of Bill Jones' paragraph file system, for sending messages without any punctuation, even perhaps the savings return and live line feeds. (1) So,

One thing, noticed elsewhere appears to be dropped by MacCom, so hopefully you can fill in the "types" and missing.

KEEP ON TIMEX'S

Did you consider that the Internet is a 7-bit system and MacCom is an 8-bit system? Like those characters dropped by MacCom.

Also, you cannot send binary files (or pictures) over the Internet via E-mail. You must first convert the binary file to ASCII. This process is called encoding. You can then send the encoded file over the Internet using SEND file. The receiver then will have to decode the file. The most common Internet file types are MIME (MIME text) and Gopherized, others are JOL and Bunker. Of course both the sender and receiver must have the programs to do the encoding and decoding. I use a shareware program - XferPro - available from the Internet as XFERPR11.ZIP from Softdisk Inc.
<http://www.softdisk.com>

Thanks for the info on the Internet and 7-bit systems. Interesting, but I don't know how we can use that to our advantage, OR how to avoid any possible disadvantages. So, are you or any problems, which each format might present upon contact? Dave

Dear Albed,

I've had my daughter send the typing "OT.BQAI to me and I enjoyed it as always.

I noted that there is a number of a FAX line for 800 somewhere in the area. I no longer have the 605-4109 phone line. In an effort to lower my cash flow (not), I have

had to disconnect my second phone line. I will be, as soon as I can get it done, by putting the fax computer on-line on my 425-7484 number via a fax modem or a voice/fax modem. It may be a while. I will keep you posted.

I am pleased to note that there are a lot of folks out there who are still using and enjoying the TS computer line. I always enjoy the Input/Output column most of all.

I noted that someone (Jim Parish?) was looking for a SuperDriver disk for an ADRCD printer w/ it. He should contact Jack Delaney, as it is his software. I can no longer make use of my 2068 as the size, resolution and color of the screen will not allow me to see what is going on. Otherwise, I could make him a copy of the SuperDriver disk for LaRKen.

I want to let you know that Ross Mooney has put my price sheets and flyer pages on the Web. I do not know the address of the page, but I may make some sales from it.

I know you are an IBM clone so I am sending along a copy of the latest version of RMG UTS utility package. Take a look at it and see what you think. The README.187 file will tell you what you need to know about to install and run it. It also tells you what the system requirements are to run it. If you do not want to try it, please pass it along to someone who may be using DOS and who may want an easier way to do things. It is very comprehensive. You may want to uninstall the self-extracting file, UTSUNAVIDEK and read the UTEMAN.DOC, the manual for the package. If you ever wanted to learn about batch programming, this program package could teach you some tricks.

Let me know what you think, in any case.

Anyone who has purchased a copy of UTS is eligible for a free update to the current version if they just send the original disk and a large SASE with \$1 postage on it to RMG. The current version is 3.0d and bears very little resemblance to versions before 2.0a. Red

As I said in November, I am available to supply TS items and information as I can as long as folks need it and I can supply it. I enjoy hearing from TS users any time. Since my wife died I find it necessary to keep as busy as possible to keep from becoming depressed. It can get awfully lonely after 32 years of having one's helpmate close and then suddenly being without her.

PS: Alas, you might mention in the next issue of ZQW that anyone who has purchased a copy of UTS is eligible for a free update to the current version if they just send the original disk and a large SASE with \$1 postage on it to RMG. The current version is 3.0d and bears very little resemblance to versions before 2.0a.

Rod Gowen

RMG Enterprises
14784 S QUAIL GROVE CIR
OREGON CITY OR 97045-8344

Thank you for the disk Rod

Perhaps you can help me find a user's manual for the following software:

INTERM Smart Terminal program version 1.00.
Copyright 1983 by Micro-Systems Software, Licensed to Westbridge Communications.

This software is on cassette tape, written for the Timescanner 2068 computer, controls the Westbridge 2030 modem.

I have a vague recollection that an explanatory article was written by Barry Carter. There may have been an official user's manual years ago.

I am using this software to collect the portions of the Internet through Delphi Online Screens.

Would appreciate any helpful information.

Seymour Miller
Forest Hills, NY
seymd@delphi.com

You are in luck, I do have both the Westbridge and the Barry Carter manuals. I can make copies and mail them to you at cost!

If I send you an E-mail message, do I use the address <sketch@compuserve.com>? If not, because I thought Compuserve usernames were composed of numbers only.

Yes, that is my address, Compuserve finally granted us, users, a name instead of a number. The number <103557,2440> still works though, I am still a number to them.

Printed Circuit Board Development Program
WIDJUP CAD#3
For the TS-2068

"It lets ambitious people create their own electronic hardware without demanding access to industrial facilities or photo laboratories."

By the late William J. Pedersen
Now available from ZQW Library courtesy of
Frank Davis
FW Computing
3 LKDOS Disks

A master program disk, 2 image disks and a manual.

For 8-pin Epson printers or equivalent.

Goes available at cost from the Editor.
Also received 1987/88 LUPDATE disks, Delay, Smart Text, COMDEX and disks by Bob Mitchell, Robert Hartung and the late Larry Crawford in LaRKen format. Other and ADRCD FD-68 disk formats were forwarded to Don Lambert.

Looks like the response to a BacklistFEST on Egn on

the 26-27 of April is cool to cold. No response from Wisconsin, 3-yes/no from Michigan and 4 total from Chicago. This event is just too close to the Redford date I guess.

Frank had pneumonia and was in the hospital. Today he wrote:

>Well, the message I had from Don Walthers, John Impellizzeri, and Keith Watson was they were going to be there. I just got back from the Dayton Computerfest (now D-C) *smile* thing) and working real hard to get ready for the show at Redford.

It will be attend from the Postal service the end of October. Frank Davis ---GATOR---

From: Stuart Honeyball <stuart@totalconnection.co.uk>
To: AKabala@compuserve.com
Subject: ZQ's Q/Live Alert

Thanks very much for sending me the Volume 7, No 1 (Spring 97) edition of your magazine. I have enjoyed browsing through it. I read out the jokes on pages 4 & 5 at our local Q/L live pub-group meeting last night and they went down a treat!

Again, thanks for sending it.

Stuart Honeyball
Bedford, UK

Alfred,

There will be something *Special* at the GoConfest in Elgin on April 26 after all. At least Don Walthers and Keith Watson will come down and now John Impellizzeri, if it seems, may also get off of work and be able to come.

The purpose seems to be send new info than anything else. Keith says it is a time when he and Don can finally get together! I am consulting the Chicago club meeting and coordinating it for April 26 at the Hinklelope, as Hinklelope has calls there. So that is what is going on here and I wanted you to know about it. ---GATOR---

To: Steven-CRASH@net.net
From: alq@redlink.com Thu, Feb 23, 1997
Subject: From Exchange for PC and LogCall

When can I get this LogCall for the PC I keep hearing about?

Also I would like to know more about From Exchange, I hear it's now public domain and I really would like a copy of it.

I am also looking for the Artist 2 for TS-2068 and possibly Windows Post.

When I went to actually buy it, it had been sold out. There was an option N1 I think that used to sell those stuff but it is been long gone.

Any of these I can buy used or even new? N1 can't buy them, someone must know whom I can get them. I may also want to get Tardward 3 or even Mispact on cartridge for TS-2068.

Things I've never heard of before, in other words, I didn't know they existed.

1) From Exchange

2) The Artist 2 for TS-2068

3) Mispact on CARTRIDGE for TS-2068

4) Tardward 3, TARDWARD 3 for LogCall is the last one I ever heard of! I wrote the Demo.

Microsoft on cartridge, don't you have a disk drive system for the TS2068? a cartridge would get in the way. I can upload LogCall to the Club BBS, 847-632-8939. It will be called LOGCALL.BSP. You should also download UTILITY.BSP to use with it. I shall copy that to Aked Kabala to see if he ever heard of this stuff and maybe get a request in ZQ/L to see if anyone has copies. Bye for now,

Robert. ---GATOR---

From: david@shootout.net at (David Tabba)

Hi too, but now more engaged with the PC. I had a problem with a script disk recently. Nothing as the PC environment would help to read it and edit the usable parts. So I hacked up a Q/L to my malpractice monitor and recently read notes into RMA, then then into Clean Diskette EDITOR.

I really would like to know if anyone has an idea of how one can get the facility of Datas Sector Access on the PC, I have QuickBasic, Visual Basic 3.04 but I do not 'C' or Pascal at all.

Just in case you may be interested, I have put a fix for the PC's year 2000 date failure on the Internet.



I had your Input/Output very informative and good for a laugh.

Jay Sheppard
Ogden, IA

Thank you Jay, I try to do my best with some humor.

Greetings! Just one last message before the show. We now have 20 people signed up. Roy Wood of Glenview will also be coming. I have rented a 50" TV and will have a PC to Video converter for the demonstrations. It should work with QPC and the MAC monitor and the Aurora card. If you have a collection of various adapters and connectors why not throw them in a tote bag. We are going to be far from any stores and if we find we need something it would be great if someone had it with them.

If you know of anyone who hasn't yet decided to come that might be interested, try one last time to persuade them. We want the vendors to get as much business as possible to keep things going.

A few people will arrive on Thursday evening. Most will arrive Friday afternoon and evening. If you aren't coming, wish us well and if you are, see you at the show.

Bill Cable
Corinth, NH

Wishing you all the best.

Dear Abele,

Thanks for the disk with printer drivers. You definitely saved me the effort of looking for the disk with any Windows options on it.

I did receive copies of UPDATES in the past, but I didn't remember that Larry Greenfield had included the information that you sent. I also did not realize that he passed away.

I was sending along the first control codes that I know which are gleaned from the printer.dat file that came with the Printc code for PCs. I used the printer.dat file for the Epson 6Q-3600 and it seemed to work for the EIC-P1124, so it is probably the code for as

Epson-compatible 24-pin printer,

Driver Name:	IKX-P1124
Port:	Lpt1
Communications Mode:	Hardware
End Of Line Delay:	None
End Of Page Delay:	None
Per Character Delay:	None
Number Of Stop Bits:	One
Number Of Data Bits:	Eight
Parity:	None
Baud Rate:	9600
Lines Per Page:	66
Characters Per Line:	80
Continuous Forms:	Yes
Sheet feeder:	Yes
End Of Line Code:	CR, LF
Preamble Code:	None
Postamble Code:	None
Emphasize On Code:	Esc, 69
Emphasize Off Code:	Esc, 70
Underline On Code:	Esc, 45, 49
Underline Off Code:	Esc, 45, 48
Superscript On Code:	Esc, 63, 49
Superscript Off Code:	Esc, 64
Italic On Code:	Esc, 52
Italic Off Code:	Esc, 53
Translate 1:	150, 35

The translate code is one of two possibilities. For example, you can tell the printer to print one character for another (i.e., substitute the "@" sign for "Q" sign). I think the above translate converts to EPS symbols to a "P" (it is pre-printing GDS) — #, you can look it up if you are really curious.)

While the information is probably too late for your day-to-day use, you now have the option of creating a new printer_driver file for your 386/486 word processor (TurboWord?). I suppose that there are some other 286/386 users who have a 24-pin printer, and so, the information might be generally useful.

Obviously, I don't know what the control codes are for changing the font via software (vs. the front control panel). That information (i.e., for changing from Courier to Script to P4, or serif) should be in your manual.

Al Peng Albuquerque, NM

Dear Mr. Kelsie,

I learned from RAG that you have a newsletter, could you give me some information. I am into the TS-1000

Gerald Anson

Phoenix, AZ

Thank you for sending me the Autumn 1994 issue of EXX QJave Abele! There seems to be much information in it about the 286, Spectrum, and QL, but a paucity of information on the 2800 or TS1000.

Maybe these latter machines are too obsolete technologically speaking. Again, thank you.

gaps@netnet.net.edu

Dear Mr. Kelsie,

I have a few questions. I have read a few references to something called "TKR2" in TS publications (including a "Wanted" ad in 2QJ4 - Spring '94. What is it?

I have read that the Portuguese Times Disk System uses a 17-pin interface to connect the controller to the interface. I have a ZX Microdrive and it uses a 17-pin connector. Are they compatible?

They are compatible with the use of a Twister board (Spectrum bus adapter) that was developed by

Nuno Pashison

940 DEAN DR APT 204

DES PLAINES IL 60018-3070

847-439-1879

Can anyone give me any information about the Times of Portugal products? I want details. At least a complete list if possible, and a dealer's address if possible.

Thank you,

LEON P HOWELL

6100 MONUMENT DR D

GRANTS PASS OR 97603

Nuno Pashison is the one person that can answer all your questions.

Here is a brief description. The Spectrum compatible Portuguese disk drive system was modified by Zeira Systems Inc. (refused) for the US market and sold as Zeira FDD disk drive system. It was available in one then two disk drives. It has built-in 64K RAM, CP/M, TOS (Times Operating System), power supply and controller. It uses Hitachi under Amstrad 3.5" diskettes.

Dear Don,

Sorry that it's been so long since I have contacted you. I was somewhat startled awhile back to see a house listed for sale in the local paper that I thought at first was yours. Upon checking your house number in the phone book, I found it was your neighbor across the street.

Among the reasons for my not writing anything about Stellar computing for some time are (1) my main occupation with the job and prison ministry seems to require more and more time (as I'm just getting started), (2) my insight is getting so it is harder to focus on a screen or printed matter, and (3) after having problems with my own QL ever since I got it that those different "fixes" failed to fix, a while back it started crashing almost immediately upon power-up. In consequence, I began using a PC for

most of my correspondence and record keeping.

That is not to say I was not in Sweden much of the time, as I have the Prism Four for PC, Tom Wood's Printer, and the S&B Spectrum/TS-2084 emulator for PC. I use the Prism Abacus program for all the financial records and budget reports for contributions to the job and prison currency, and I have setup Prontos for addressing envelopes.

Robert Harting

After reading your previous letter about my experiences with my Training Card QL and running QPC on a PC, I set up my ZIP drive to use it with QPC also as a removable-disk hard-drive. I also tried it with the Stacker 4.0 compression program and that works fine as well, with QPC files on the ZIP drive.

I thought perhaps other QL users who are contemplating getting QPC might be interested in some of these things, so I did the enclosed re-write to clarify the last paragraph on page two, and also described my use of a ZIP drive. If you think Alard would want to make an article out of it, just let me know and I can send him either a hardcopy or the enclosed, or I can put it on a DOS disk as an ASCII file if he or you have DOS wordprocessing capabilities. With best regards,

Robert Harting

Richmond, IN

Yes I can read DOS ASCII disks, whenever it convenient for you

Dear Dan,

I've been having fun with my TS-1500 with the full-sized keyboard. I previously wrote a brief test demo that runs on a TK machine, and then I did a more elaborate version that requires a TK machine. Since the demo takes a fixed amount of time to run, I got the idea of doing a multi-part demo for the TK machine, using the elaborate version as the basis, with each part automatically loading and running the next part. And when I say "automatically", I mean the user doesn't touch the tape recorder after the initial LOAD, the unit is simply left on PLAY while all segments LOAD and RUN, one after another. The recorded programs are spread out on the tape such that when the program is ready to load the next segment the next segment is right there.

Of course, this has no particular practical application because recorders run at slightly different speeds, and because I discovered running a TK program on a TK machine will have slightly different (slower) timing than on a TK machine, it would be nearly impossible to develop tapes for systems other than my own with the proper spacing (not so wide apart that the wait for the next load is boring, but not so tightly spaced that a slightly different setup would run past the start of the second program before trying to LOAD it. Still it's fun to have a TK tape-based machine automatically execute a longer program. Almost like having Windows on the hard drive as virtual memory? Well, maybe not almost, but you get the picture.

Gilliam V. Parrish

Boggs, OK

From: Don Weidman To: Bob Smoger

Just wanted to thank you for writing us to the Cono show. We received a warm welcome from everyone we talked to. That says a lot for your group since we were not Cono people.

Would you consider expanding the show for TS folks next year? I think if we started talking it up a year in advance, we might get some more folks there. In fact I'm going to just mention it this weekend at the QL show and see how much interest there is. I doubt if the QL show would merge in but for myself, I'd be happy to go to both shows. Regards,
Don

Alard, I showed them the Spexxy CD at the CoCoFest. 300 games - emulators - ---HYPER---

From: Don Weidman To: Keith Watson
Re: Spexxy CD

I assume you want one of the Spexxy CDs. Would you like me to pick up one from Frank this weekend? Bulk stuff from the CoCo show.

Begin, winding through some of the stuff we brought back. Are you interested in any new releases? I only needed a few of them. The ones I didn't have were interesting though. A good set of Synchronix came and a pile of the Boston Computer Society TS newsletter. Also some newsletters I never even heard of.

We should never read a blank cassette tape again. Let me know how many damn you want. :-)

After we all go through the stuff, I hope to put a list together for everyone due to go through.

Don't look like my commercial 3600 stuff. Bunches of tapes but no detailed index so you need to load everything to figure out what it is.

From: Don Weidman To: Keith Watson
Re: Spectrum

Let's take it one by one. We'll see if anyone is willing to help us with other machines, RGB info or even a PAL monitor. Can't hurt to ask right? That's how I got the Spectrum in the first place. :-)

From: Keith Watson To: Don Weidman
Search like a good alien. I hope it works. I did try the computer I got at the CoCo fest and it works. Next I tried it with the raster board and IntelCatalan that worked as well. Next, I going to burn a TK EPROM for Intuition. I so it will run in Texas mode. Should work since it does go the opposite.

From: Don Weidman To: John Ingolfsson
Re: Alio

Been making the web on the Alio. Also took it apart to check it out. Looks like I can do a lot with it if I'm patient. If I'm willing to spend time with a soldering iron, I can upgrade the 1 Meg chips to 4 Meg of 1 Meg static. The 730K floppy can be upgraded to 1.44mg. I can use a VGA monitor as a 640x480 monochrome monitor if I can find the unique Alio monitor cable to wire up. Also has an ASCII port (almost RS232) that supports hard drives. So, with some serious work, I can have a 4 Meg. Monochrome 640x480 QL with hard drive and the Alio special stuff. In

strong to run the Atari BASIC. It brings up 3 windows ☺ just like the default QL setup. Guess who did the Atari BASIC? Metacore - sound familiar?

Looks like Atari support on the web is pretty good. There is an Atari Tech support group as well. It looks like I'm going to have to get a regular service like Netcom. I can't just to connect garage from Ford or from the Internet. There is a way with Dega News but that gets really ugly.

I'm really going to be hating at the Dayton Handout for Atari and Atari ads and stuff. At least now I have a bit of an idea what to look for.

From John Impelizzoni

To Don Williamson

Can't wait to see the Atari, really sounds interesting, especially the 3 windows! What does seem to be the next step on making Atari's into QL's?

I'm trying to do some persuading to get one of the two days off for the Dayton Handout.

Started going thru the stuff from Elgin. Both 1980's work, the 1980's work but a couple have the dead keyboard problem. 2040 works. There was a Gladstone 54K R.A.J. Pack with one of the 1980's that doesn't work along with a 19K that's dead. Couple of others do work. I want that box of books and have another box for you & Keith of documents and copies of books I have already.

With sadness, our President and friend Harvey Rat, passed away in the middle of April. Harvey's daughter called me and stated that the service would be held on Sunday morning, April 28th, Rockville Centre, NY. Bob Malloy posted the arrangements on the Internet and we attended the service. There were over 100 men and women at the service - a testimonial to the man, Harvey Rat, my friend. I have been mourning Harvey for a week, thinking about this man I will miss. I recalled the first time I met Harvey at Bob Malloy's home in the fall of 1982. We were going to join the LIST Group in Montpelier at Paul Donnelly's home. Every second Sunday of the month, we would meet at Bob Malloy's home and then motor on to the LIST meeting. Approximately, five years later, we lost the meeting room at the Montpelier Library. We didn't know what we would do for a meeting place and Harvey came to our rescue - we could meet at his home.

Harvey had become our President. For ten years he would wield the gavel with wisdom. Who will take over the reins? I don't know.

Harvey was my friend. My joy and my peace. And for his wife Sandy, and their children and grandchildren, we wish you well. Harvey, we all love you —

Bob Glider

(from the April '87, LISTings Newsletter)

Battery Backup for the 286's

I want to my favorite electronics place a few days ago and while there saw a bunch of AA battery boxes (battery holders). These were old ball boxes with space for three batteries but only had the contacts in place to use two batteries. I had been thinking about doing the project by Tim Swenson in the July 1993 UPDATE pages 42-44 in which he made an external power supply for the 286. BUT with

these old ball battery boxes at \$4.95 each I could hardly resist trying out the idea.

So I had the first part of the project parts and all I needed was the plug to fit the external power socket and the wire between the battery boxes and the plug. So into the garage to find some old stuff and as I looked I remembered having out the cords with plugs attached from the old ball power supplies I had accumulated. I finally found them and I found one with a white cord which had a right angle plug on the end. I tried the plug in the socket of the 286 and joy of joys it fit. Whether it made contact or not I didn't know.

I disconnected the lead that connected to the center of the plug and then soldered that to a red lead from the battery box. Then I soldered the black lead of that battery box to the red lead of the other battery box and that box's black lead to the other lead of the cord. Before I soldered I did test slightly, taking on the wire and after soldering I checked it with heat from a match.

I put batteries in the boxes and tested for center position and the 4 volts. That checked, so I plugged it into the problem 286 and turned it on, so far good. Then I turned it off and turned it over and removed the internal batteries and back right side up I turned on the 286 and it came on. I turned it off and waited a good 20 minutes and again turned it on and still working. I turned it off and installed the internal batteries and checked, still came on when I press the two shift keys. I unplugged the external batteries and then I tested and the 286 came on so it should.

Now I can safely change batteries without losing the contents of the 286. I have a few project cases so I will check into using one to hold the battery cases so it looks neater. The cord that I put on the battery box is 4 foot long. That gives more than enough slack to turn the 286 over and remove and install new batteries. -BG

Donald Lambert

To Bill Cofie bcofie@jason.net.com

Bill, we met at the Midwestern Post back in '87. The Chicago Area had a small Rockwell April 26, 1997 at the Halley Inn in Elgin Illinois. We knew of the MSBQUICK fest but went ahead anyway. We had 7 people attend this short notice fest. It was one table at a CoCoFest. The CoCoFest people asked me to find out if there would be interest next year of combining a CoCoFest with a bigger Rockwell FEST including the QL Showman. As I saw it, Dayton is of less interest to Rockwell people and they might rather attend an Elgin, IL fest instead. The Elgin event has gone on for 4 years now and that was the first year Rockwell was invited. Wisconsin didn't come down but Wilson, Impelizzoni and Williamson of Q-BASIC came in from Michigan, Near Parkston, Bobby Math, Phil Rytchowski and myself came from the Chicago area. I understood the Michigan area also want to hold it a week later? I believe we will do exactly what we did here next year and wonder if it could be expanded to include the QL Show?

Also I saw the QL fest at Rockwell called for TSI66662X and Spectrum/TS2066L users. Could you guess for me how many of those folks came to Rockwell? Thanks, Bob Swager bcofie@jason.net.com

Hello Dan,

You, I am willing to let the balance of my TS inventory go for \$1000.00 including shipping for the whole week!

I really need the room and am no longer making merry sales of the product. I am lucky to sell \$50 per month any more.

I, too, would hate to see it all go into a dumpster, but I have very little choice if no one buys it.

I have posted our some price lists from my inventory program and am enclosing them. I think that most all of my TS inventory is included on these sheets. Anything that is not listed would still be shipped out with the other package. Whoever buys one part of the lot buys all of it, including the TS 1800 items. It's an all-or-nothing deal.

If they are interested in the deal just tell them to send the check and I will begin shipping the boxes out as soon as I can get them packed up.

As you know, my system has been getting worse of late,

From: Timothy Swenson <swenson@prophet.com>
Subject: Re: ZQJA

Alon,

Since my QL is not really up to speed, I have not worked on any new areas of the QH1. The last one was back in December. If you do not have it, I can send it to you.

I am starting to get the urge to do more with my QL, but since my ED drives, modems, and mouse are in storage, I really can't move forward. Even the disk drive I have kludged together is having problems. It can read HD but can only format DD.

When is the next issue of ZQJA due? I might be able to put an article together about new thoughts that I've downloaded off the Internet.

Timothy Swenson Tel: (310) 367-0235 ext. 005
Systems Administrator Fax: (310) 367-0230
email: swenson@prophet.com

FROM THE CHAIRMAN'S DISK II

Donald Lambert

A lmost I got this started before the last minute. Like the last two or so issues, I finally got some stuff done on the Z88. Some can be interpreted as very little from our standpoint. From another it was a lot of time smiling over why it didn't work or how should I do it. From the article I submitted it will explain some of my problems BUT mostly a failure for me to understand what I was doing.

Back to trying to do hardware.

I picked up some connectors at Radio Shack and will try for a Z88 to Z88 connector to transfer programs from one to the other. If I get that going I will report on that later. Also, I have the parts to build a new interface for the disk drive. All I need is the 15 pin to 5 pin converter. I will have to poke into the head to be sure there is nothing there except wire. My head is under the cover that is put over a connector (not one of those interfaces that has on a lamp post wiring for trouble). The original disk drive cable has a head that goes from 15 pin to 5 pin but I haven't seen one locally or in the catalogs that I have.

Not that I don't distrust the Z88 but I take a peek at the screen every few days (if I haven't been using one) to see if the BAY LIGHT light is not on. Now that I have a built up external battery I can safely change batteries without losing everything in the computer. For a while I was was having to reset the clock and date often. Hopefully I am beyond that point.

I have a disk board for the TS-3000 that I have no done for. The board has 48-85 A-E design by AERCO on it. Two EPROM's labeled "TS-3000 Tacklet 000000-0000" and "TS-3000 Tacklet 000000-0000". I have plugged it in and nothing happens and punching keys does nothing. Anybody have any information on this disk board or the Tacklet?

A nother interesting module that plugs in on the back with a lead-through. It is enclosed in a blue box and has on each end a screw terminal with space for 4 connectors. It has a chip C174M000K. It is a two sided board and one end on the front (as connected to the computer) has B, g, C, -, +, go and drive on the output. On the other end is some 16 bit data, (maybe scan) and go and tape out and are blurred by heavy solder and etched on on the front board ENTER 1044 and below that L20002A. I think it might be half finished since there is room for two more 14 pin IC's. It has readouts for a 47K resistor and something is there and a 74pF cap that is missing. What is it and are there any docs for it?

The information that I did not give for external battery back-up for the Z88 from Tim Swenson's article is: UPDATE is given here 370-427 project box 034 X 314 X 2 (height) \$1.79, 370-396 D battery holder \$1.79, 174-1500A external DC power plug 5 3/8 run \$1.40. The two lead wire for the connector is something else. I got mine from a AC to DC power supply that I moved after I cut the cord. The corner of the plug is positive for the Z88.

The mentioned making a tie clip to control the cables for Z88 in the attached case out of Velcro straps that he had in now together \$1.77 did Radio Shack sell for \$1.00? Anyway they have the strips that are 3/8" wide and 3 feet long to be cut to length to make cable ties. 270-1475 (new item) for \$1.49. Your choice of colors as long as that is black. He also to get that cluster of cables on the back of the TS-3000 under control.

I enough for this issue. Better get the BAYED to disk and printed off since a storm is coming and I could loose power. Till next issue, so long. 00

QMJ

Every once in a while I'll spend some time checking out what's available on various QL-related Web sites. Here is what I found recently.

QLAY - QL Emulator for MS-DOS

Just released is QLAY, a new QL emulator for MS-DOS. QLAY is a freeware program that emulates a L28K or T28K QL. It comes with the 3840M, but Toolkit II ROM images can be added. QLAY is at version 7, which means that a lot of important features are not available. QLAY does not recognize SER, PLP, HDK, or NET devices. MDV image files are used for storing data.

QLAY requires a BIOS with at least 3840 Mbytes of memory. A 486/66 will emulate a QL at full speed (some what slower than QPC). Even though QLAY is a bit limited in getting data in and out of it, it emulates a QL pretty well. To demonstrate how it works, QLAY comes with an MDV file with QUELL. When running QLAY with the QUELL MDV file, after the emulator starts, it boots up into QUELL. With my limited testing, QUELL works just like it does on a real QL.

QLAY is written by Jan Venema of the Netherlands. Jan plans to continue development to get a "real" working QL on a PC. This will include support of QL disks, saving files to the hard drive, pointing to the parallel port, etc. When version 8 comes out, Jan plans to make all of the source code available.

QLAY is available from Jan's web page:
<http://www.intel.nl/softlib/A-JanVenema>

Jonathan Hudson's Updates

Jonathan Hudson has a number of updates of his software available on his web page. In brief they are:

- QTH v1.62b (3/11/97) Beta test of QTH. Includes Q-flow console enhancement, large (wide) screens, new console options, etc.
- QDOS 3.2L v3.36 (3/11/97) These file transfer protocols are needed for QTH. The reported file is it correctly reports transfer percentages for large files.
- QFAX v3.02 (3/28/97) Minor updates. Adds 100dpi mode to printfile and fixes "SAFE" bug in glshtimg.
- ATP v1.4b (3/19/97) Removes the random, irritating, and reversible unless "pushed too old" message. This update only contains the fixed binary file.
- UNPIC v3.02 (3/29/97) Tools to convert .com and .exe images to GIF, GIF8, GIF87, or PCX.
- Winexplor v2 (3/13/97) GUI demo program to explore window events, with source code and win_get (read pointer with time-out) code. Modified for correct mouse handling in event routine.
- QFAX v3.04 (1/12/97) This version provides no new features, but fixes known bugs in the previous release.
- QYES (3/29/97) A version of Xcopy or Gcopy-type.

232r QLins Alive!

OFF THE NET

by Tim Swanson

Open on screen. Follow mouse cursor. Featured in QL Today.

Jonathan's page is at:
<http://www.jthudson.demon.co.uk>

QPC Support Page

Mixed Kijiga, the creator of QPC, has put up a QPC support page. It primarily lists the current version of QPC, SMSQ/M, Corell, and the installation program. Mixed reports that he is working on version 1.33 of QPC. He is also working on a different version of QPC that uses a new emulation technique that should speed things up. Also on the page is a PD version of QPC (version 1.15). There is also a "hard disk" file that contains software, the manual, and sample AUTOEXEC.BAT and CONFIG.SYS files. The "hard disk" file is about 1.5 Mbytes, so it may take a while to download.

The QPC Support Page is at:
<http://www.dreamcable.de/qpc>

Ergon's Web Page

Ergon Development has a web page with a number of useful utilities to download.

- PICE v3.1 - Shows the QL to redraw partially overlapped windows. Requires PICE (available on web page) in PLE. Also requires Minserv or SMSQ.
- Turbofile v2 - Allows the use of some Turbo Toolkit keywords on Minserv or SMSQ.
- CPU Toolkit - Two keywords to tell you what type of CPU you have (80386, 80387, or 80486), and how fast your (Super) Gold Card is running.
- Another one of their pages lists PD versions of some of their software.
- Microbasic v1.45 PD - Microbasic is a development and debugging utility for SuperBasic and SBasic.
- DEA Intelligent Disassembler v2.21 PD - DEA takes an executable file and converts it back to assembly code. Useful if you want to figure out how a program works.
- Flippy Disk Utility v1.21 PD - Aimed for the (Super) Gold Card user, this utility pack includes a disk editor, disk copy/compare/verify, file browser, collect, and Post Screen.

Ergon's web site is at:
<http://www.geocities.com/Gilboa/HalleyPark/6553/>

Availability

All of the above listed files (except for the QPC "Hard Disk" file) are available from QLU Programs, on either HD or 3D disks. Please format the HD disks before sending them, my floppy drive refuses to format them properly.

QMJ Freeware

Timothy Swanson
38735 Lexington St. #230
Fremont, CA 94538

More Net-Surfing With The 2068

by David Lounsbury

Before we get into details about the many ways of using the 2068 to gain limited information from the Internet, let's briefly clear up some misconceptions and issues from last time: 1)

After hitting an E-mail message to you, the mail prompt "Y" will appear. This indicates a reply, should you type, "Y" and press ENTER. This also deletes that particular E-mail from your electronic mailbox. In order to delete the letter *only* (without a reply) then simply enter "D" after the mail prompt, "Y".

Regarding Mailing Lists, a couple of months ago, entering the line

```
lynx http://www.unc.edu/indiana.edu/indiana
```

would generate a long list of mailing lists for us to join. Apparently, they have gone out of business. Currently, the net is a model of freedom - freedom to see, lose, and abuse.

When using lynx to navigate the web, there are two contrasting ways of entering a screen:

Either `lynx username@compuserve.com`
or `lynx, all by itself`

In the latter case, the Internet banner will fill the screen. Now, you can ENTER.

```
username@compuserve.com
```

in order to connect with username's site at compuserve.com. In this case, we learn, that `username@compuserve.com` is not found!

So, for cool sites on the Internet, use `www` or `http://www` but do not abuse `www`!

We wish to take this opportunity to announce the opening of a new Message Board on SCL 2068, entitled Advanced 2068 Typeset, and dedicated to new applications for our 2068 like ASCIIArt, browser emulating, and Internet applications. SCL 2068 is at 330 681-0326.

Now, we wish to pass along some useful information on how to use the Internet with the 2068.

The idea is that we want to see the screens keypad, the key row on the 2068, to set an screen for navigating the web.

1 Get the UNIX prompt \$ onto the screen.

2 Enter the lynx command.

3 After lynx displays any "banner" page, the cursor stops for your response. So, press a, in order to display the Options Menu.

4 Select the keypad option, by pressing k

5 Press the space bar, or BREAK key, repeatedly, till the value of this option has the number keys pending to screen, not to help.

6 Accept this value, by pressing ENTER.

7 SAVE this setting and leave the Options Menu, by pressing =

OK, now that you're into your configuration file, which is maintained by UNIX.

From this point on, we can use lynx to browse around the web pages, as follows:

"T" acts as the *end key* (move to the end of current web page)

"J" acts as the *down key* (move down one link on the current page)

"F" acts as the *page-down key* (move down one screenful)

"B" acts as the *left key* (jump back to the previous web page)

"O" acts as the *right key* (follow the selected link to the new web page)

"^" acts as the *home key* (move to the top of current web page)

"U" acts as the *up key* (move up one link on current web page)

"P" acts as the *page-up key* (move up one screenful.)

This is not the only way to set up the keypad for surfing the net, but we find it a preferable way to waste away the hours at the keyboard.

Navigation 101

We note, that key k above, "follows the selected link to new page". On the 2068, a link is selected, by pressing k when the link is listed at the bottom of the page.

What is a page? That's what you get, by ENTERing

```
lynx
```

or `lynx username@compuserve.com` on a bar. It is a list of information and information screens, called links. You access the information screen or "follow the link" by "clicking on it". In the case of the 2068, you press O or ENTER, while the desired link is at the bottom of the screen. Try it, you'll like it!

Should we get lost, just press =, which takes us back to the first web page.

We search for a pattern, by pressing ? and going to the top of the current web page, where we ENTER (pattern).

Using the number keys to navigate the web is actually necessary, since special keys don't work on the 2068. These include keys like end, down, page-down, left, right, home, up, and page-up. Actually, Larry says to use SS-D, in order to get the *home key*, but it never works for me! So, here we go:

1 LOAD a web page, containing a large amount of data, including color graphics

2 Press p

3 Choose from many Output Options

Save to a local file ---ooo- Saves the text of a web page to a file on the UNIX host, where it can be downloaded, etc. Mod the file ---ooo- loads a copy of the web page to screen

Print to the screen ---ooo- This is what I always use.

None of the color graphics appear, i.e., no garbage. I just capture it to my capture buffer, if desired.

When using lynx to browse the web, we can get hypertext (web sites), graphicspage (screens of screens), Sp catalogs of files, telnet (access to other Internet sites),

news (news to usenet), or mailto (E-mail.)

Suppose we run into some good files, while using Ep or Gopher. Then, we press d (download). Two choices follow:

1. SAVE to disk.

2. DOWNLOAD to local terminal via ZMODEM.

#1 Will download the file to a disk on the UNIX computer.
#2 Will download the file right to the ZMODEM, since I've never had problems with ZMODEM.

In response to the UNIX prompt I can send M&E mail, by using the line: MAIL: maison@usenet.com

But, if we are already in lynx, well we just use MAIL TO: maison@usenet.com in order to accomplish the same objective!

I think, if we are using lynx to look at a web page, hitting a lot of links, then, we can use lynx with mailto to SEND mail to any one of the other end of a link!

Next time, we will start, by clarifying any mistakes from the first and finish up, by discussing the cool way to access USENET!

Keep-On TIMING'n.

Insomnia Over the Z88

by Donald S. Lamont

CAUTION! This is an attempt to document the start of learning about the Z88 by a person that just might be more naive than the person seen in the mirror in the mornings appears to be. However, here goes.

I have two Z88s, one is the one that I sent in to have the Z88 upgraded to V4.0 ROM with 512K RAM installed internally. The other is a used (or recommended) Z88. The upgraded Z88 came with a manual that was as standard book binding and the pages were coming out, so the day that the used Z88 came, I was in the process of removing the pages and pushing them to fit a half size binder I had. I completed the task soon after I saw that the used computer came with a very bound manual. I also have the two books, one is the manual that came with the computer and the other is the book "Z88 Mugs" by Vic Garbark, Bill Garbark and Andy Bony.

I have one question, is there any instructions for the V4.0 ROM that are different than for the earlier ROMs? That could explain why I have trouble with it.

I have had a Z88 for quite some but have not used it. Part is the lack of motivation to get it going and part is that the times that I tried to do something I ended up being looked out by lack of knowledge of how to do it. Part is that I do not find out how to do what I want to do from the manuals that I have for the Z88. And part is that I didn't really give it much thought about the way to store a document in memory. Just recently a concept made it more easy to rework the process of getting the document into memory. I suddenly saw that if I considered the memory as a mass storage device (and it is) then I could more easily relate to that.

My progress has been anything but smooth. When I heard that a disk drive could be connected to the Z88, I JUST had to have one. So after finding and receiving a pair through Radio Shack I ordered the hardware and software to enable me to use the disk drive. But I soon learned that I had to have more internal memory so I ordered a 128K RAM and then I put the program transferred from EPROM to RAM. Then I tried the disk drive to FORMAT a disk and got an error message. So I tried again and still an error message. So I finally used a different disk and this time it worked. The first disk was bad apparently.

About that time I learned that I could upgrade to Version 4 ROM and 512K internal RAM, so I did. Then

the problem hit. Seemed to work A.K. until after a while the computer came back on and the keyboard was locked up. I read and reset the manual and started out from scratch and I again tried it and again, it works up (powering and locking) with a locked up keyboard. I tried it several times and finally sent it back for repair.

It came back from Texas with a note bad keyboard and new OK, but testing, and it stayed asleep longer but still woke up locked up. I reset all the material as witholding, I had put the batteries in and I had never been and it had not stayed in the sleep mode. I wondered why the computer needed to be reset so I tried it with only one reset and this time it woke up about 24 hours later. I tried it again and had the same result.

So I again tried it and this time I did not press the reset button at all with the strengthened out paper clip. I checked the computer several times, that is I just looked to see if the screen was on. Finally after several days I pressed both SHIFT keys and it came up and was apparently normal. I even turned the unit that off and that worked. Now the computer has the version 4 ROM and 512K RAM installed internally. I think it might have been a later model computer since in the upper left corner of the computer it has Z88. The manual had the pages glued to the spine and is bound as the fourth edition.

I ordered a second Z88 computer, used, that has a version 3 ROM and nothing extra added to the computer. The manual that came with it is a spiral bound manual and the pages were as clean as the same. The upper left corner of the computer has Cambridge Z88. At least it works like the manual so far as reset and the sleep mode goes.

Today I tried to install the 128K EPROM that has XCBI (disk system software) on it into the updated computer. I perceived thinking that the program had come how disappeared from the EPROM but after I tried to install it into the unupgraded Z88, I discovered that I was supposed to be in the FILES to use the EPROM. There is No Cue Card Or Simply List Of Commands For This Computer! That is sort of like when I first started with disk drives on the TS-2088 and the Larkin LK208. I had a file card with the commands on it. It took me a long time to figure out on the Larkin system how to put an AUTOSTART program to work with it was not on item 0. The program was on an 80 track drive and my 88 track

drive was drive 1 & 2. I went up to the middle of the night with the number 100 RAND USB 100 GO TO 1 (ENTER) and from RAND USB 100 NEW (ENTER) and vocal up came the program.

Back to the Z88: I now have to see how to get the program into the computer so that I can CHAIN it. What is CHAIN? I don't know but it is a BASIC command. The description of it is in my 3rd edition The Fuses Handbook by David A. Lee runs to 3 pages so it is not an unknown command. I will see if that makes it any clearer. It didn't so that is no surprise.

Before I ramble on I will give some thoughts here about the Z88. When I put the EPROM in that had the XCB (disk operating system software) I had it stood on edge to push the EPROM in and once I used an old wood tapped typing stand it was slippery. The EPROM scolded and the Z88 slipped in my hands and lit on the bottom and slammed the cover shut and it beeped as it was supposed to do. I guess I did not do it any damage but in the future I will use a less slippery surface to support the Z88 when changing any of the plug-in modules.

Also, I found it hard to pull out the modules till I used a small screwdriver to slip in the end of the module and then lift it out. With my stiff fingers I cannot grip the modules (or cartridges) so it is not possible to remove without some sort of help.

When do I store my two Z88s? I put them into a hanging file folder. I have one of those 112 keyboard covers (toppers) for one but the other I have none. I suppose that the two SHIFT keys won't get pressed in the hanging file but just in case I made a deal out of cardboard to keep the danger off. I cut a piece of corrugated cardboard with the corrugations running the long way with the dimensions of 11 1/4" by 18 1/2". I made joints 1/2" from either end and used a ruler to guide a screwdriver that I used to pull along the ruler to sort of crush the corrugations so that the cardboard would fold at that point. The cardboard could be covered with wallpaper to make it look better. The spine is wider than for Z88, so that it

helps hold the pressure off of the keys if the file drawer is full.

I had a sort of battery show bar too so I replaced them and then checked the batteries with a Radio Shack battery tester. The tester showed the batteries to be in the yellow or replace area. A voltmeter will give a higher reading since it does not load the battery. The RS tester has a meter across the battery to load it for the test. When I put the batteries in I did not see flash batteries.

I have XCB installed in both Z88s, but somehow it is spelled differently in one. But CHAIN will check both into the working area so it can be used. Next step will be to test out the disk drive on both computers.

Here are the functions of the XCB (Disk Drive Software)

CAT DELETE SAVE LOAD RENAME
FORMAT MARKS CLUT STATUS REPORT LNK

To use XCB you need to be in BASIC and CHAIN "DISKDIR", when you press ENTER, there will be the XCB menu. Use the arrow keys to move around, when the highlight bar is over the option that you want to select press ENTER and the prompt will guide you. It will rotate with CAT highlighted. I had a disk that was not FORMATTED by XCB in the drive and pressed CAT and the REPORT LINK reported "Unformatted Reply". Put the highlighted bar over FORMAT and press ENTER and you get on the main screen "Are you sure?" press Y and ENTER and it will FORMAT. The light on the drive will blink for a few times then will start to blink as it FORMATS each track. Then it reaches the end and comes to go back and check each track but at a faster rate. When FORMAT is done the REPORT LINK will report "DONE, OK", the highlight bar is over CAT again. Press ENTER and you will see on the main screen as a result of the CAT "Free Space 302240 Bytes". There is no disk name.

The manual (3 pages of text) for XCB states that there is a maximum of 40 files per track with two heads of files. Or 80 files per disk. But remember that the 3.5 disk

Civilization

ZC-TEAM MAGAZINE

The program is an adaptation from the famous game by Microprose for PCs that requires 1Mb of memory. But... the ZC-83 has done it with only 1K of memory.

You are the leader of a small group of people at the beginning of history and you have to transform your people into a big nation. But you are not alone in the world, there are others that will compete with you. Unlike the PC version, the ZC-83 is your only competitor here.

At the start of the game, 4 numbers are displayed - 2 for each group. Z and K indicate the infrastructure, M and L the military strength.

Before you know it, another set of numbers appears - the ZX has attacked

you and the numbers reflect your losses. The cities (infrastructure) losses are always 3 times as much as the military losses.

You have to make decisions on how to divide your strength between the military and the cities keeping in mind your ultimate goal. Peace with prosperity or expansion or war.

```
10 LET M=VAL "0"
15 LET L=M
20 LET A=VAL "1"
30 LET K=A
40 LET L=M
50 LET A=(INT (L*.5)+1)
60 LET K=(INT (L*.5)+1)
65 GOTO 10
67 LET L=L+VAL "1"
69 LET M=M+1
70 PRINT " Z"/INT A;" K"/
INT K;" M"/INT M;" L"/
```

```
80 LET B=VAL "1"
85 LET W=W+1
90 LET A=K+.75*W
950 LET M=M+A
115 LET W=W+1
120 LET K=B+.75*W
130 LET L=W+B
135 IF L=L+THEN LET L=L+1
140 PRINT "Z"/INT A;" K"/INT K;"
M"/INT M;" L"/INT L
145 IF A=0 THEN GOTO 100
148 IF K=0 THEN GOTO 100
150 INPUT M
160 LET A=M+A
170 LET L=M+B
175 LET K=M+B
178 IF A=0 THEN GOTO 100
179 IF K=0 THEN GOTO 100
180 GOTO 50
190 PRINT "Z"/INT A;"
K"/INT K;" M"/INT M;"
L"/INT L
```

is only used on one side. Further experimenting will be done as soon as I get into all the operations of the Z88 itself.

About the 3.5 disks that I am using. As a computerist I had a great box of 3.5 disks. Even with a problem that I just now discovered they are still a great buy. The problem is that the little slider that controls the write-protect is missing. So I used some gummed labels to cover the hole on both sides and since the labels don't like to stick to the plastic I put Scotch tape over, beyond the write labels (won't tell those write protect slots on the 3.5 disks you cover the hole to be able to write). When I bought the disks I never thought to check for the write tabs.

Back to the problems again. Both Z88s showed bad luck, so I had to replace batteries AND both failed to retain memory after the battery change. I panicked when neither computer came up with a screen but did when I did the hard reset. The one that doesn't like to sleep is back sitting up again. Thought I had that problem solved but not. Of course I had to power down and remove all the modules and get back into the FILER after replacing the batteries and doing a hard reset. I can't remember just how long the other battery had been in the computer, so this time I put a little sticker on the battery cover with that time typed on it.

Now I am trying to get a file named and SAVED to the computer so that I can get it to SAVED to disk. Maybe I should PURGE the computer and start over with an empty memory. This actually works differently than the TS-3088.

I just learned that I was not giving the Z88 a hard reset since I had failed to open the cartridge door. I will see if that action does the job with megaliths. I have started a crib sheet to remind me or I go along.

I finally got a file SAVED to the FILER, and I put it SAVED to disk. But the commands are not like the book. Or at least not like I read the book. But I did discover how the disk drive stores the program on disk. By that I mean the amount of disk space is used-up by a single file. I had two sentences, that was a file, and I SAVED that to disk. The smallest file on disk is 1760 bytes. So that means since the limit of file names is 80 that it is possible that the last part of the file will not get saved.

Progress is slow but I learn. I have learned that the really important information is located in the middle or back of the manual. BUT the important thing is to name your

external memory right after you create it or else if you name it after you have SAVED some files, you won't use the file names when you go to the FILER. As I type I wonder if it is on the CAT RAM if I designate RAM:0 if I will see the file names. I had a file SAVED on disk that I reloaded back to the Z88 and I finally noticed it by way of RAM:0/FileName. I guess I could go back to the PANEL and re-label RAM 0 to RAM 1. Or I could use INDEX to see file names and then transport the files from RAM 0 to RAM 1. Then erase the files in RAM 0. It would be easier to remove the RAM cartridge and do a HARD RESET but I think that if I try the transporting of files from one RAM to another that I will learn more.

In a sense FILER is a sort of DOS for some of the other features of the Z88. If you think of the RAM as disk drives then that is a good analogy. I realize that I spend a lot of time making the clock and calendar. But it is easy to go from PIPEDRAM to the FILER and use ESC to exit FILER and go back to PIPEDRAM to exactly where you were before.

Right now the Z88 with the MIX external memory finally seems to be working correctly. I am now timing the time out feature and see if it will go to sleep as it is supposed to. The last time it woke up with a frozen keyboard, I did a soft reset and since then it seems to be behaving. The time out run is about 4 minutes before it shut off and I put it to bed in the file folder in the filing cabinet.

I do hope that I haven't bored you to tears with any tale of woe but I imagine that many have went through a lot of difficulties before they became proficient with their computers. With one computer that does not operate correctly and a poor map and an unknown road to travel I have learned quite a lot. I can see a lot of uses for the Z88 once I feel confident in its use.

If I was writing the manual or the book "Z88 Magic" I would have put the order of ways to get going a lot differently. I would have had the initialization with battery initialization first so that the naming of the cards or modules. Following that I would have the PANEL to set American or European for the date and then the CLOCK. Then the most important feature, the FILER, would be next. [FS is the command to use in the FILER to save a file to RAM from PIPEDRAM. To LOAD use [PL. They are here that information buried. GO.



Doc Holiday

Morgan Edge

Virgil Edge

Bat Masterson

Men of Tomtomstone

Daisy Be Good Part XI

by David Lannon

Well, grey and grey, we have attempted to bring Daisy into the 21st century, by making better use of RAM and faster I/O operations.

In order to retain all Daisy's features in the process of optimization, we have broken it out into four specialized routines, which Loads and Savesets equally.

We still use some virtual memory, but we incorporate RAMDISK as much as possible, like for storing names. Then, instead of waiting for a file to LOAD from disk, we only wait for a lock to switch, from Home to Dock and back, again.

Of course, Z80 has some faster and bigger replacements for the 280 chip, but they require a modified Operating System. So, we built ourselves to the 280 chip, LRDASH, and RAMDISK.

Our new and new and improved version of Daisy is matched to our 9 pin printer, M1109 by Brother.

We wrote "Myra 84", in order to bring out the best features of our printer, and we wish to now consider how the Daisy signal is handled on the printer channel 89. The 2808 looks at the printer port 127 for a busy signal, IN 127 3 IF IN 127 = 255 THEN RETURN

4 GO TO P1

Note, that GO TO P1 is a way of saving memory, when all we need is GO TO 3, and we check that printer is idle, before sending any control codes, OUT PQ, so, yes, to the printer.

GO SUB P1 OUT PQ, so (where we have po=127 and so=27)

Also note, that my 9 pin printer has IN 127 = 102, when it is BUSY, different from the 24 pin standard. But, the way it is coded, we are looking for printer idle, all the way.

For our 9 pin printer, we use our Print Style Menu to select among Pica, Elite, and Italia, after specifying Condensed, Enlarged, and Double-Stroke. Then, we "set" the printer, by sending all the selected information out Port 127 by frequent use of GO SUB P1. After the BESS, we can ESCAPE to either the Format Menu or the Function Menu.

Making use of the pre-selected parameters, the master printer follows all our wishes, regarding print chain to print our Daisy documents with.

By GO SUB 4, we mean to PAUSE and read the keyboard for input and PRINT our selection (where we have 2=255)

```
2550 GO SUB 4: PAUSE 99: LET s=CODE
PRINT CODE="P" PRINT BEEP: RETURN
```

With sq=255, we call the Bells Buzzer routine.

As discussed above, the Print Style menu, go CL, is loaded as a Screen Stamp.

Print Style Menu

FIRST select print mode (4-7)

(1) Pica (80 CPL)

(2) Elite (96 CPL)

(3) Italia (85 CPL)

NEXT select print style (1-3)

(4) Condensed (1.5 times CPL)

(5) Enlarged (half CPL)

(6) Double-Stroke (same CPL)

(7) None (reset)

(8) Format menu

(9) Function menu

LO= 73=

GO= 11=

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2000 GO SUB 4: PAUSE 99: GO SUB 4:
2000 GO SUB 4: PAUSE 99: GO SUB 4:
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2000 LET screen LET screen LET
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2000 GO SUB 4: PAUSE 99: GO SUB 4:
2000 GO SUB 4: PAUSE 99: GO SUB 4:
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reset the power while connections are correct. Otherwise, it may fry the drive circuitry and/or the power supply.

From boxes of floppy disks later, and after encountering several files that had been corrupted by my QL crashing from time to time over the years, I had made WCOFFY of all my programs and everything I had over those that I wanted to try using with QPC using with QPC. Overall, I am very pleased with the enhanced capability of QPC that includes all the commands of SuperDASC, Super Gold Card, SRAASIC, SRAQAR, and Toolbit 2 which installs automatically. It runs at an excellent speed with my IBM/Cyrix 333M CPU.

I should note, however, that QPC seemed to be contrary, while my new QL drove happily did 1440-sector formatted disks/writes on a couple EXHD disks I tried on it, QPC would not recognize them as QL disks, but QL or QPC-formatted DHD disks work fine on both. QPC will format EXHD disks to 288 sectors on my HD PC drive, which my QL/Trump Card of course will not recognize but a Gold Card system would.

Another anomaly I encountered with QPC and my 104-key Windows 95 keyboard appears similar to what IBM ROM keyboard if users have reported with some keyboards, and that is that some keys do not produce their respective characters. On mine, SHIFT 2 produces ", \ gives #, " gives @, SHIFT 3 gives (, @, CTRL SHIFT 1 gives !, and SHIFT 3 gives the pistol symbol. So far, I have not discovered any keystroke in combination that produces the back-slash V.

When making a program that requires using \ to produce a line-feed or a display of print-out, the ALTKEY function can be used. First, HOT - GO must be entered to enable ALTKEY (HOT - GO also enables returning the last keystroke sequence used by hitting ALT ENTER together as on the QL). Then entering ALTKEY "F", CHRSQ(0) will produce "F" whenever ALT and the PC \ key are pressed. This and other ALTKEY definitions may be saved as a DO file if desired. With a disk in PLP 1, for my keyboard definitions I entered the following as a direct command: OPEN NEW #1, KITS PRINT #1, THAT GO "PRINT #1, "ALTKEY "F", CHRSQ("PRINT #1, "ALTKEY "F", "FCLOSE. After ENTER creates the file KITS on the disk, WHEN KITS will display the routine and DO KITS will submit it. Now ALT \ produces \, ALT produces " and ALT 3 produces #. Note that CHRSQ(0) is used to define the \ character, and using CHRSQ(0) and CHRSQ(0) allows both " and " to be properly nested in the menu PRINT "ring."

Speaking of printing, in order to use a parallel printer with the parallel IF driver provided with QPC, the command in the DOS AUTOEXEC.BAT file that calls for QPC to load should read QPC-PI. This causes QPC to look for parallel port LPT1, which is the default PC printer port. QL programs such as the PERSON menu require some slight changes. With QPC loaded and running, and the program disk in PLP1, enter LHM INSTALL, PAR and key the spacebar to select PARALLEL. Highlight the driver file to be added. Key F10 to change the PRINTER.DAT file to the last for printer POST shows PAR as the one that is being selected. Key F3 to install and save this added driver back to the disk. Then PRINTER.DAT file may then be used with XCHMAGC by doing a WCOFFY of it to RAM1, and then, with the XCHMAGC disk inserted, enter the command line

WCOFFY RAM1,PRINTER.DAT TO PLP1, XCHANGE.DAT. An alternative for programs that were written for the old serial-to-parallel printer IF adapter is to simply place a PAR, USB BSE command at the start of their respective load routines.

State court agrees that nose is part of the body

NEW YORK (AP) — A state court has ruled that a nose is part of the body for purposes of a federal statute that prohibits the breaking of a bone or the use of a dangerous weapon.

The ruling, which was issued by the Appellate Division of the New York State Supreme Court, was in a case involving a man who was charged with breaking a bone or using a dangerous weapon.

The man, who was charged with breaking a bone or using a dangerous weapon, was charged with breaking a bone or using a dangerous weapon. The court ruled that a nose is part of the body for purposes of a federal statute that prohibits the breaking of a bone or the use of a dangerous weapon.

Although I have a 130B hard drive on my PC, I added a ZIP drive so I do not have to take my hard drive space for storing data files. Other removable-disk drives are available that are faster and have larger capacity, but I bought the ZIP drive for less than \$300. My ZIP disks cost me about 13¢ per megabyte, or about 41¢ per megabyte if used with Starter 4.0, which gives a nominal capacity of over 240 Mb per disk. Those accustomed to the space-consuming programming used with Sixel-based computers are likely to be amazed at the sheer size of Windows 95 programs that can qualify fill a hard drive. One that was pre-installed on my PC hard drive takes up 150 Mb by itself.

The hard drive format provided by QPC requires that a WINchester partition be created for WIN files on, rather than using my hard drive for WIN partition(s). I am installing them on ZIP disks also. My four hard drive partitions are C:, D:, E:, and F:, so each 130 Mb disk on the ZIP drive is seen by the PC as drive G:, and by QPC as WIN3. The "Something" of a WIN partition actually creates a large DOS file with a driver called QXL.WIN, which can consist on the same disk with other DOS files. Allowing for the overhead required for the file and driver, about 45 Mb of the maximum available for a WIN partition on a 130 Mb ZIP disk. Be prepared to wait over an hour for a partition this size to be done. If Starter 4.0 is used to create a compressed ZIP disk before doing a FORMAT WIN4, the WIN partition(s) it may be up to about 240 Mb in size, or proportionately less if room is also being reserved for DOS files.

How to Hack on The ZX Spectrum Les Cottrell

A complete guide to creating POKEs on the Spectrum, featuring full examples. Devoted and written by

Richard P. Swann

NB This document was originally intended to be posted in *Your Mindblowing magazine*. Downloaded from the Internet by Les Cottrell.

CONTENTS

What You Will Need

Glossary

The basic idea

Getting started with hacking

Conventional Hacking Techniques

Forward trace and backward trace

Easy Loading Systems

Headerless loaders, turboloaders and compression

Decrypters

Single decryptor loading systems

Advanced Hacking Methods

Stack trace and interrupt trace

Commercial Protection Systems

Download, Ultimate loader, Mike's Gen Loader,

Download, Search Loader, Paul Owens Protection

System, Speedcode

Epilogue

Smuggling updates etc etc

What You Will Need

If you want to use this book successfully, you will need the following:

An understanding of Spectrum BASIC. If you are total beginner, you will almost certainly find this book too complicated, and hence useless to you. If you can understand most of the Spectrum manual, then you should be all right. If you don't understand a word of the section on using +3 DOS in machine code in the +3 manual, don't worry, 'cause I don't either!

A disassembler or a machine program. You can, in theory, hack anything without one of these, but in practice, it would be impossible for a beginner, and most to impossible for someone experienced. My personal choice is Hawk's DEVPAL, but if you have the program BTK and QP Disassembler (which were on the cover tapes of VS #73 and #77), that'll do fine for this book.

Some games to hack. Obviously business software is out of the window because it's illegal to hack it, and you don't need to anyway. Strategy and adventure games are pretty suitable to demand a POKE (although it's possible, and I'll show you how I hacked an adventure later on), so you're left with arcade and arcade adventure games. Most of the time you'll want to find infinite lives and/or energy, but there are always exceptions. This book concentrates on games that you're likely to have, which are games which have been on magazine cover tapes, or bestsellers.

Patience and determination. This is the most important thing of all. Finding POKEs is challenging without any knowledge of how the program works, or even a knowledge

of the language it's written in! So be prepared to do some serious THINKING!

A Multiface or other "magic box" device. This is not essential, but it is extremely useful, and a few sections in this book require you to have one (but as few as possible, I might point out).

GLOSSARY

Breakpoint — An instruction put in by a disassembler which will return control to it when it is executed. Also something to do with trains.

Crackloading — Writing a routine or executing some code which will get round some element of a protection system, enabling the user to put a POKE into the game.

Crash — An undesired effect which the programmer or user did not intend to happen. Classic examples are the computer starting itself to give the old "OZ 1983 Simulac etc., etc.", or a whole load of floating squares. Also a now defined computer magazine.

Decrypter — A short program contained in a protection system which, when run will change garbage into KILNishide code. You need to create a decrypter to create a hack for it.

Endless loop — The Multiface equivalent of a breakpoint, put in hacking a protection system or doing a stack trace. The computer will keep executing the same code over and over again, indefinitely, unless the Multiface button is pressed. See also endless loop (no he he!).

Overlays — A block of machine code which does not make sense to a human. The computer will attempt to process it, but will almost certainly crash. Also what the disassembler calls an anomaly.

Hack — A self-standing program which when run will load a game and execute certain details. Also the act of getting round a protection system. (See also crack). Also a lot of anonymous people from Scotland.

Headerless loader — A loader which does not contain the first "header part" of a file specifying it's name, length etc., but has it ready built into memory. This makes the program harder to hack.

Interrupt — Small program which occurs every 1/50 of a second, regardless of what the computer is doing.

Loader — Any program which loads a file off tape into memory, and executes it. This may consist of simple BASIC commands, a headerless loader, a turboloader or even a protection system.

Operating system — The built in program into the computer to deal with all the basic things like reading the keyboard and loading software. This is BASIC in the case of the Spectrum. Most protection systems deliberately confuse the operating system or lock you out of it.

Patch — Replacing a bit of code with something designed to hack it. This patch may consist of a jump elsewhere in memory, or a breakpoint. Also something that patches wear on one eye.

POKE — The process in which a single byte of memory is changed. Originally, games were hacked by one or two

POKEs

Protection system — A block of code which tags on the front of a game's loader and prevents anyone from accessing the code it is protecting. At least, that's what it's supposed to do!

Trace — Looking through a block of code with the aim of finding something specific (such as an infinite lives POKE). This may be forwards, backwards, interrupt or stack trace. Turbocharger a loader which loads it's life off tape at a faster speed than usual. This speeds up loading. The turbocharger may be hidden by a protection system.

PART ONE - The Basic Idea

Before we get down to some serious hacking, it will be a good idea to know what we are looking for. Okay, I know that some of you may think that this is pointless, but if you don't know what you're aiming at, you'll never get anywhere.

Basically, we are going to examine a program, and change it so that certain instructions are altered so that the game becomes more easier to the user. This may be in the form of infinite lives, infinite energy, immunity, infinite bullets etc.

The only way we can hope to do this is to understand what is going on in the game. And because most games are written in machine code, we're going to have to understand that as well. Please don't be put off by the thought of learning a new language, in fact you need know very little machine code knowledge to hack most games.

To start with, we'll just look at infinite lives. Lives are normally a small number, between 3 and 9 (although some games may have more), and the computer thing with all games that have lives is that somewhere in the game, the amount of lives are set as a definite number, and somewhere else, the amount of lives goes down by one. In order to get infinite lives, we would have to remove the command in the program which decreased a player's lives.

You probably have an idea about how a lives system would work in BASIC. Say if, for argument's sake, a BASIC game had three lives, you would expect to see something like...

```
100 LET LIVES=3
```

...somewhere in the program. Then, a bit further on, you'd expect to see

```
300 LET LIVES=LIVES-1
```

In order to get infinite lives, we would simply remove line 300 altogether and RUN the program.

A similar idea appears in machine code, but the way it's done is slightly different.

For starters, machine code doesn't have any variables! You might therefore wonder how on earth the computer can store anything. In actual fact, the computer can store information anywhere in RAM, as you may well know, and this is exactly what happens in machine code.

In Chapter 24 (The Memory) of the Spectrum manual, there's a detailed description of the Spectrum's memory. The best way to visualize the memory, I think, is to imagine 65,536 boxes, each one containing a piece of paper with a number from 0 to 255 written on it.

Therefore, it is no problem for a computer to store the

number of lives in machine code, since it can just put it in a byte in a memory location, leave it there, and come back to it later.

You should be aware that in machine code, commands are also stored in memory locations as bytes, so if you get commands and data mixed up in memory, the computer could easily try and execute the data, thinking it's a command, and trying to execute it. Unlike BASIC, there are no errors in machine code, and the computer can execute anything it finds, so in this case you will get a crash. So most programs keep program data and program commands separately.

Anyway, in order to store three lives in machine code, we'd put the number 3 in a memory location. Unfortunately, we can't do this straight away in machine code, and we can only do it by using what are called registers.

Registers store information in the same way as memory locations. They are bit more versatile though, as you can perform calculations with them. All the same, they are not the same as variables in BASIC, and we more like a pair of hands used for counting.

The main register we'll look at for now is the A register (sometimes called the accumulator), which can store a single byte and have some doors to it.

What we would do to store the number three in a memory location is to put the number 3 into the A register, then put the contents of the A register (which are, of course, 3) into a memory location.

```
The actual way of writing this in machine code is  
LD A,3  
LD (8000),A
```

Actually, strictly speaking, the above isn't machine code at all! Machine code as the computer sees it is, as I explained earlier, consists of many bytes in memory, which are pretty meaningless to humans. So some people invented assembly language (which is what the above is), where each instruction carried out by the computer is given a name (called a mnemonic).

The above program features one command, used in two different ways. The command is LD, which is pronounced "load". This has nothing at all to do with loading a program from tape. It basically is a transfer of information from one place to another. The address in the instructions is read as "with", as the whole instruction is read as "Load A with 3". It now seems obvious that this instruction is putting the number 3 into the A register.

The second command is also LD, but the way it's used is slightly different. The brackets mean "the contents of", so the whole instruction is read as "load the contents of 8000 with A". (Think of a bracket as a byte in memory, where everything in the bracket is part of that byte). Therefore, this instruction would make the computer take whatever value is in the A register, and store it in memory location 8000 (of course, it could be any other memory location as long as it is unused).

So the overall result of the two commands (formally called operations) would be to put the number 3 in memory location 8000.

Congratulations! You've just learned the first way to

back. Clearly, if it's a real program, we found those operations, we could change the LD A,3 to something like LD A,180 to get 180 lives!

Before we can do any "real" hacking, I'd better discuss how "real" machine code is written.

Every machine code instruction contains an opcode, and some instructions need an operand. An opcode is simply the instruction the computer is going to do. Every number from 0 to 255 correspond with a specific opcode. You can find a complete list of opcodes in Appendix A of your Spectrum manual.

The operand is used whenever there is ambiguity over something. If you look in Appendix A of the Spectrum manual, you will see that the opcode 01E is "LD A,n". "n" in this case can mean any single byte number i.e. a number from 0 to 255. But it's possible to put any number within the range e.g. LD A,3 or LD A,840 or LD A,880 etc. The computer has to somehow know what data it is dealing with, and this is where the operand comes in. In machine code, whenever the computer comes across the opcode 01E, it looks at the byte after the opcode, and assumes it's the data needed. So, if the computer came across the bytes 01E and 840 in succession, it would put the value 840 in the A register. In this example, 01E is the opcode, while 840 is the operand. After executing the instruction, the computer goes to the byte after the operand, and starts running code from there.

In the second instruction of our example, the opcode is 012, i.e. "LD 000,A". The ambiguity is in the address where we are going to store the value of the A register. In this case, the operand takes up two bytes, hence the "00". which again comes after the opcode. You should note that this is an address in memory, and is always referred to as two bytes. So you might expect the machine code equivalent of LD 0000,A to be 012 000 000. Except it isn't! For some odd reason, in machine code, all two byte operands are written the wrong way round, so the actual machine code equivalent of LD 0000,A is 012 000 000. There is no hard and fast reason why, it's just vitally important that you remember this.

In short, the program of the previous page is written as...

```
01E 003 012 000 000
```

which takes up five bytes

Not all instructions require operands. For example, DEC A (short for "decrease A", which subtracts one from the A register) has no ambiguity at all. There is only one way to decrease the value in the A register, so the instruction only takes up one byte, in this case 010. No operands are needed.

Right, time for your first bit of hacking! From what we've discussed above, we want to find, somewhere in the game's code, a set of instructions which put the number of lives into a byte in memory. So if the game had three lives, we could expect to see the bytes...

```
01E 003 003
```

unfortunately, we don't know where in memory the number of lives is going to go, so we can't work out the operands for the second instruction (003). But in fact, we don't need to, for if we find the above sequence of bytes in a program, we can simply examine the two bytes after the

sequence to find out where in memory the number is being put.

So let's put this into practice and look at actual game. For convenience I've chosen *Dragon's World*, which featured on a TS Cover type issue 63 (December 1990). I would have chosen a more recent game, but they all have some form of protection on them. Besides, choosing *Dragon's World* is a relatively easy.

Getting the game in memory without it running is easy. If you've typed out a fair few POKEs in your time, this will be no problem. Just MERGE the BASIC loader and put a STOP statement before the RANDOMIZE USER statement. Then RUN the program and wait for it to load, and the OK message appears.

Now we have the game in memory, we can load STX and examine it. You have to be a bit careful here, because STX occupies 6K of the Spectrum's memory. Although it can be anywhere in memory, it's possible to overwrite the all-important lives code in the game with STX, so we have to be careful. The best places to put STX are in the graphics, map or sound data. There's no easy way to tell where this is, so you'll have to try pot luck. But it helps if you know where the game loads to, so load up STX at any address, and press J and then Caps+9 to read in a header a couple of times. Then read the headers of the three blocks of code after the BASIC. They are

```
Bytes: 5 0001,1800
```

```
Bytes: M 0100,0400
```

```
Bytes: P 0000,0200
```

The first block is the loading screen. The second block is in actual fact the game's music (but you wouldn't be expected to know this), and the third block is the actual game itself. Therefore, we can put STX anywhere above 0000+0200+0200. For argument's sake, let's put it at 1800, which is 0000 decimal. When we've finished hacking, we can enter "Bytes: M" and run the program. Load up STX (after having stopped the BASIC and entered with a STOP statement) at address 0000. 0044

Now at last, some hacking. Bearing in mind that you start the game with five lives. Press Q to search for a byte. Enter the address we want to start searching at as 0000, because that's the start of the game. Now type in the following:

```
01E 003 012
```

These are the search bytes we described on the previous page. Keep pressing N for "next" until all of the memory has been searched. You will get the following addresses 000C and 0010C. You can ignore the one at 0010C, because it's in the middle of STX and outside the main game code, so that leaves just the one at 000C. Press R for the edit and type 0000C. You'll see the following bytes

```
00 00 00 1A 00
```

So this tells us that the computer puts the number five in box number 001A (remember that 1 byte numbers are reversed). Now to hack the game, we simply change the number 5 at 000D to any number of lives we want (the maximum is 999).

Now, get out of STX, reload the "Bytes: M" file and RANDOMIZE USER 04000 (the original command in the

BASIC), and key presses - you will have whatever amount of lives you wanted!

All that remains to do is to write a proper back for it. 8080 is 16-bit, so your back would be something like "MEMOR the BASIC loader, and assign POKE 34912 to before the RANDOMIZE USR statement, where 'n' is the number of lives."

And it's as simple as that. If you can understand what we've done so far, you're doing well, so stick at it.

Any unprotected game like *Sworder's World* is backed on the same way, except you will probably have to reload STX to a different address, and you may find that in your search for the *POK*, you may come across several locations in memory outside STX that have this pattern. In this case, you'll have to use trial and error to work out which one holds the number of lives.

If it, of course, perfectly possible for you now to find "number of lives" POKEs for any unprotected game under the sun, and in the early days of Spectrum (10-14), this would have been perfectly adequate. Of course, what you really need in the real city party - INFINITE lives. This is done by taking things just a step further.

What you basically need to do is find out which memory location the number of lives are being put in. Then you need to search for parts of the program which put the value of that memory location in a register, subtract one from it, and put the new value in the register back. Then you have to rewrite the code slightly so that the computer "forgets" to decrease the value in the register, and simply puts the old value back as given.

Coming back to *Sworder's World*, we already know that the number of lives are stored at memory location 411A. I normally refer to this memory location as the "lives store" for obvious reasons. All we have to do is search for all the occurrences of the address of the lives store. So, search for 41A,401, and you will find it referred to at the following addresses:

775D 816D 81A9 803F 81E2C

You can ignore the one at 81E2C because it's in STX, but you can also ignore the one at 803F, since that's part of the lives setting routine we discussed earlier. So the routine to decrease the number of lives must be at one of the other locations.

You should note, that any instruction that involves the lives store will begin at the byte before, because 1A and 41 are two byte operands (see page 3 for more about operands).

So for starters, press I to edit an address and type in 8779A. You'll see the following:
779A - 3A 1A 41 C3 41 59

If you look up 3A in Appendix A of your Spectrum manual, you'll see it corresponds to the instruction LD A,(NN). This is simply a reverse of the LD (NN),A instruction, in that the value of a memory location is put into the A register. This is important, because subtraction of any sort can only be done in a register, and usually in the A register.

After the computer has executed the three byte instruction 3A 1A 41 (which is LD A,(311A) in assembler), it executes the instruction C3. If you look up C3 in

Appendix A of your Spectrum manual, you'll see it corresponds to the instruction JP. JP is short for "jump", and is in a sense like GOTO in BASIC. What the computer does is to jump to a location in memory. As you can see, there is ambiguity as to where it is going to jump, so we need a two byte operand. Like this one can have just before, the bytes are written the wrong way round. So C3 41 59 means JP 5941. In this case, the computer would go to address 5941, and start executing code from there.

It is possible that the code to decrease the number of lives is at 5941, but it is unlikely, because it wouldn't have to jump to a completely different area of memory. So we'll leave this part of memory, and go onto the next instruction, at 8042. Press EDIT to leave the editing procedure, and edit address 811F. You'll see the following:
811F - 31 1A 41 43

It is the instruction LD HL,(NN). HL is another register like A, but its main difference is that it can store two bytes at once. So LD HL,(NN) requires a two byte operand, whereas LD A,n only requires one. So here the instruction 31 1A 41 means LD HL,411A. The next instruction, 85 doesn't need any operands, and as the instruction we've been looking for. It means DEC (HL). You've already come across brackets meaning "the contents of", so as you might have guessed, DEC (HL) decreases whatever is at the memory location with the same number as HL by one. In this case, we know that HL is 411A, because we've just set it in the last instruction. So DEC (HL) will decrease the value of whatever is in memory location 411A by one in this case.

But we already know that the number of lives is stored at memory location 411A. So clearly DEC (HL) is going to decrease the number of lives by one!

What we need to do to make an infinite lives POKE is to somehow overwrite the DEC (HL) so that the computer doesn't decrease the number of lives. There are two things that can be done. Firstly the address containing DEC (HL) can be replaced by 0. The number 0 relates to an instruction called NOP. NOP is short for "No operand", and in short means absolutely nothing! When the computer encounters the instruction NOP, it will do nothing and execute the next instruction. So if we overwrite DEC (HL) with NOP, the computer won't decrease the number of lives, but do nothing instead. The vast majority of POKEs have the format POKE address, 4 for the reasons described above.

If you use *Sworder's World* changing the DEC (HL) to NOP, you'll find that you only get one life instead of five! In this case, you should overwrite the DEC (HL) with OR (HL). OR (HL) is a single byte instruction, 86. Don't worry about what it does, because it isn't important. What is important is to remember to do this if you only get one life.

Now in *Sworder's World*, replacing the DEC (HL) with OR (HL), and you'll have your infinite lives! The DEC (HL) is at address 8161, which is 302D decimal, while 86 is 132 decimal, so the POKE would go something like "MEMOR the lives, and put POKE 302D,132 before the RANDOMIZE USR statement, RUN the program and restart the tape."

Now we've covered the mathematics of machine code involved in hacking, we can look at more detailed ways of finding POKEs.

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